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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,519	02/20/2004	Philip Stashenko	25669-012 CON DIV	2668

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EXAMINER

HOWARD, ZACHARY C

ART UNIT

PAPER NUMBER

1646

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/783,519

Applicant(s)

STASHENKO ET AL.

Examiner

Zachary C. Howard

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 17-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-5 and 17-33 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### ***Status of Application, Amendments and/or Claims***

The amendment of 2/20/2004 has been entered in full. Claims 6-16 are canceled.

Claims 1-5 are amended. New claims 17-33 are added.

Claims 1-5 and 17-33 are pending.

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-3, 5, 17, 18 and 25-33, in so far as they are drawn to an isolated polynucleotide of SEQ ID NO: 1 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.
- II. Claim 4, drawn to an isolated DNA of SEQ ID NO: 3 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.
- III. Claims 17, 19 and 26-33, in so far as they are drawn to polynucleotides encoding a fragment of a polypeptide comprising SEQ ID NO: 4 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.
- IV. Claims 17, 20 and 26-33, in so far as they are drawn to polynucleotides encoding a fragment of a polypeptide comprising SEQ ID NO: 5 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.
- V. Claims 17, 21 and 26-33, in so far as they are drawn to polynucleotides encoding a fragment of a polypeptide comprising SEQ ID NO: 6 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.
- VI. Claims 17, 22 and 26-33, in so far as they are drawn to polynucleotides encoding a fragment of a polypeptide comprising SEQ ID NO: 7 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.
- VII. Claims 17, 23 and 26-33, in so far as they are drawn to polynucleotides encoding a fragment of a polypeptide comprising SEQ ID NO: 8 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.

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- VIII. Claims 17, 24 and 26-33, in so far as they are drawn to polynucleotides encoding a fragment of a polypeptide comprising SEQ ID NO: 9 and cells comprising said polynucleotide, classified in class 536, subclass 23.1.

The inventions are distinct, each from the other because of the following reasons:

Groups I-VIII are directed to different products. Although the products are all nucleic acids, and with the same classification, each represents a patentably distinct product, having different sequences and structures and requiring separate sequence searches. Group I is directed to a nucleic acid encoding osteoclast proton pump subunit that is 116 kDa, of which the polynucleotide of SEQ ID NO: 1 is an example. SEQ ID NO: 1 encodes a polypeptide of SEQ ID NO: 2 of 822 amino acids and is a 116-kDa osteoclast proton pump subunit. Group II is directed to an osteoclast proton pump subunit of SEQ ID NO: 3, which is 847 amino acids and would not be 116-kDa in size (and therefore is excluded from claims 1 and 17). Each of Groups III-VIII is directed to a different fragment of a 116-kDa osteoclast proton pump subunit. While each of these fragments are found within the sequence of SEQ ID NO: 2, each of these fragments (which range from 21 to 32 amino acids) may be found within the sequence of other proteins, and therefore each fragment requires a separate sequence search. A search of more than one of the sequences would be an undue burden. Therefore, although the classifications for the nucleic acids are overlapping, each represents a patentably distinct product, having different sequences and requiring separate sequence searches. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their separate search requirements and/or divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that for the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary C. Howard whose telephone number is 571-272-2877. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa can be reached on 571-272-0829. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

zch

*Bridget E. Bunner*

**BRIDGET BUNNER  
PATENT EXAMINER**